# **GreenConnect™**

# Wireless Load Control 20A Switching Relay, Wireless Load Control 0-10V Dimmer, and Wireless Load Control 800W Dimmer



Cat. Nos. ZKS00, ZK700, and ZKM00

### WARNINGS:

- TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.

### **CAUTIONS:**

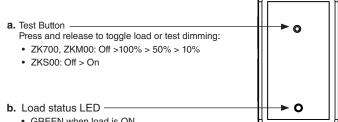
- Use this device with copper or copper-clad wire only.
- · For indoor applications only.
- SAVE THESE INSTRUCTIONS.

### PK-A3524-10-00-2B-W **ENGLISH**

### INSTALLATION INSTRUCTIONS

3. Restore power at circuit breaker or fuse.

4. Confirm system wiring by using the test button to turn on/off the device and cycle through pre-set dimming levels. This will confirm that wiring is complete.



<ul> <li>a. Test Button — Press and release to toggle load or test dimming:</li> <li>ZK700, ZKM00: Off &gt;100% &gt; 50% &gt; 10%</li> <li>ZKS00: Off &gt; On</li> </ul>	•
<ul><li>b. Load status LED</li><li>GREEN when load is ON.</li></ul>	<b>O</b>

5.

	Press and release to ZK700, ZKM00: O ZKS00: Off > On	00	Ŭ	•		
	<ul> <li>b. Load status LED</li> <li>GREEN when load is ON.</li> <li>Unlit when load is OFF.</li> </ul>					
-	Proceed to system progra	amming.				
		SPECIFIC	ATIONS			
	Catalog Nos.	ZKS00-D0W Switching	ZK700-D0W 0-10V Dimmer,	ZKM00-10W Phase Cut		

	SPECIFICATIONS			
Catalog Nos.	ZKS00-D0W Switching Relay	ZK700-D0W 0-10V Dimmer, 50 mA Sink	ZKM00-10W Phase Cut Dimmer	
Input Voltage/ 120-277VAC, 50/60Hz		120-277VAC, 50/60Hz	120VAC, 60Hz	
Input Current				
120V	Standby: 0.2W Max: 0.5W+Load Current	Standby: 0.2W Max: 0.5W+Load Current	Standby: 1.0W Max: 1.2W+Load Current	
277V	Standby: 0.3W Max: 0.6W+Load Current	Standby: 0.3W Max: 0.6W+Load Current	Not rated for use	
Load Ratings				
General Purpose Rating @ 120V	20A	Not rated for use	Not rated for use	
LED, CFL, Electronic Ballast @ 120V	10A	8A	450W	
LED, CFL, Electronic Ballast @ 277V	10A	5A	Not rated for use	
MLV @ 120V	Not rated for use Not rated for use		800VA	
Magnetic Ballast @ 120V	10A 10A Not		Not rated for use	
Magnetic Ballast @ 277V	10A 10A Not rated f			
Resistive, Tungsten @ 120V	1 6.67A 6.67A 800		800W	
Resistive, Tungsten @ 277V 6.67A		6.67A	Not rated for use	
Motor @ 120V	Motor @ 120V 1/4Hp (FLA 5.8A)		Not rated for use	
Motor @ 277V	1/3Hp (FLA 3.0A) Not rated for use			
IP Rating	IP30			
Network Connections	IEEE 802.15.4, 2.4GHz, wireless, mesh network up to 75 ft range between device			
Operating Temperature	32°F - 122°F (0°C - 50°C)			
Storage Temperature	-40°F - 185°F (-40°C to 85°C)			
Purpose of Control	Operating control			
Action Control Type	1			
Pollution Degree	2			
Impulse Voltage	4000V 4000V 2500V			

### **Product Description**

GreenConnect load controllers deliver simple wireless lighting control. Compatible with virtually any switching or dimming load, GreenConnect load controllers offer a scalable and described in the state of the s

### **Before Installation**

- Ensure location is within network range.
- When mounted inside a junction box, a plastic cover must be used to prevent RF signal interference.

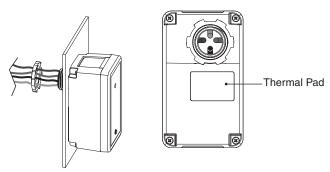
NOTE: ZK700: 0-10V Control Wiring - Connect the violet wire to the + 0-10V line and the pink wire to the 0-10V common using Class 1 or Class 2 wiring methods as indicated in these instructions, ballast/fixture/driver instructions or ballast/fixture/driver label markings. Observe all requirements of any authority having jurisdiction with respect to wire type, sleeving, isolation methods, and the like.

### Installation

# WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!

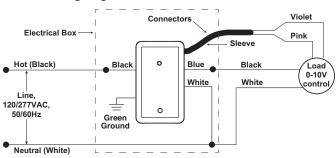
Mount the Load Control device to junction box or luminaire through .50 in. hole or knockout and secure with provided locknut.

NOTE: For ZKM00, ensure the thermal pad is in contact with the metal junction box. ZKM00 is not to be installed in enclosed junction box.

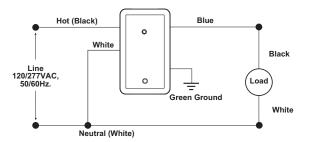


2. Remove 0.75 in. of insulation from the line and load wires. Remove the precut insulation from load controller wires and connect according to the wiring diagram. Ensure wires are firmly connected with no exposed copper.

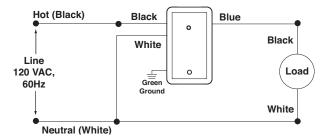
### a. ZK700 Wiring Diagram



## b. ZKS00 Wiring Diagram



### c. ZKM00 Wiring Diagram



### System Programming

#### 1. Required devices

- GreenConnect requires one load control device to create a wireless network and function as the network manager. This can be a wireless load controller, dimmer, or switch. Receptacles and battery-powered devices cannot create a network.
- A maximum combination of 16 load controllers, wall stations, or sensors can be connected in a network.
- GreenConnect devices are also compatible with GreenMAX DRC Wireless for systems that require more than 16 devices

### 2. Creating a GreenConnect network with your load controller

- a. Press and hold the test button. After about four seconds, the LED will blink back the device diagnostic. Continue to hold for seven seconds until the LED blinks amber once, then release. The LED will start blinking amber rapidly, meaning you are at the main menu.
- b. To create a new network, tap the test button twice. The LED will blink red while the device resets as the network manager. The LED will blink green slowly once the GreenConnect network is created. The load will toggle OFF and ON twice as a visual indicator that the network was opened and ready for devices to join.
- c. Every 60 seconds while the network is open, the LED of the network manager blink red once for each device enrolled in the network. This helps you keep track of how many devices the network manager has in the network.
- d. To close the network, tap the test button once. All devices in the network will toggle their load OFF and ON twice to confirm the network was closed.
- e. The network will automatically close after 10 minutes of inactivity
- f. To open the network again, return to the main menu on the network manager and tap once. All connected devices will toggle their loads OFF and ON twice when the network opens.
- 3. Connecting your load controller to a GreenConnect or GreenMAX DRC Wireless network
  - a. Ensure only the network you want to join is open. If more than one network within range is open, your device may join the wrong network.
  - b. Go to the main menu by pressing and holding the test button for seven seconds until the LED blinks amber once, then release. The LED will then begin blinking amber rapidly.
  - c. Tap the test button once. The LED will blink green slowly while your device searches for a network to join. When it connects, the load will toggle OFF and ON twice with all connected devices in the network.
  - d. To join a GreenMAX DRC network, use the GreenMAX DRC App to scan the QR code and follow the instructions included with the GreenMAX DRC room controller.
  - e. If after 60 seconds a network is not found, the LED will stop blinking and the device will

### 4. Resetting your load controller

To remove your device from a network, or to restore it to default settings, press and hold the test button for 12 seconds until the LED blinks amber twice, then release. The LED will blink red while the device leaves the network and resets to factory defaults. If the device was a network manager, the reset will break the network and any enrolled devices will no longer be connected.

### 5. System features

- System settings are saved in the network manager.
- · GreenConnect is a single zone system.
- · All lighting loads respond together as a single lighting zone
- · All sensors form a single occupancy zone.
- · Daylight values are aggregated across all sensors in a single daylight zone.
- The default settings are:
  - i. Occupancy Mode: Auto-ON/Auto-OFF
  - ii. Auto-ON level: 50%
  - iii. Sensitivity: High
  - iv. Occupancy time-out: 15 minutes
  - v. Partial Off: Disabled
- vi. Photocell: Disabled

### **6.** Changing the system features

- a. Go to the main menu on the network manager by pressing and holding the test button for seven seconds until the LED blinks amber once, then release. The LED will begin blinking amber rapidly.
- b. Tap the number of times that corresponds to the feature menu you want to access. The LED will blink the feature menu number in green, pause, then blink the menu setting number currently saved in amber. For example, to access feature menu #3 (Occupancy Auto-ON level) from the main menu, tap three times. The LED will blink green three time then blink amber five times for the default setting #5. This blink back pattern will repeat every 60 seconds.
- c. Once within the feature menu, tap the number of times that corresponds with the new setting you want to select. For example, to change the default Auto-ON value from setting #5 to setting #1, tap once. The LED will blink the number of times corresponding with the selected option in amber. Watch the new blink back patten to ensure the setting is what you selected. If it isn't, just enter you selection again.
- d. Return to the main menu by pressing and holding the test button for seven seconds until the LED blink amber once, then release. The LED will then begin blinking amber rapidly.
- e. To exit the main menu, press and hold again for seven seconds until the LED stops blinking amber, then release.

#### 7. Features menus

Feature #3: Occupancy Auto-ON level		
Setting #	Value	
1	100%	
2	50%	
3	25%	
4	Manual-ON (vacancy)	
5	Restore last level (default)	

Feature #4:Occupancy Sensitivity			
Setting #	Value		
1	Medium		
2	Low		
3	High (default)		

Feature #5: Primary time-out				
Setting # Value				
1	Test mode (30 seconds for 5 minutes then reverts to prior setting)			
2	60 minutes			
3	30 minutes			
4	15 minutes (default)			
5	5 minutes			
6	Disabled			

Feature #6: Partial-OFF level			
Setting #	Value		
1	Disabled (Default)		
2	50%		
3	25%		

Feature #7: Secondary time-out			
Setting #	Value		
1	5 minutes		
2	15 minutes (Default)		
3	30 minutes		
4	60 minutes		

Feature #8: Daylighting Target			
Setting #	Value		
1	Disabled (Default)		
2	25 footcandles		
3	35 footcandles		
4	45 footcandles		

Feature #9: Secondary level			
Setting # Value			
1	0% (Default)		
2	50%		
3	25%		

Menus and LED feedback					
Action		LED Color	Blink Rate	Status	
	Device	Red	3 times	Not enrolled in a network	
4 seconds	Diagnostic	Green	3 times	Enrolled in active network	
			2 times	Enrollment incomplete	
			1 time	Enrolled, no communication from the network	
Press and hold:	Main	Amber	1 time	Release after first amber blink to enter	
5-9 seconds	Menu		Rapid	the main menu. The LED will begin blinking amber rapidly	
Тар	1 time	Green	Slow	Enter pairing mode and search for network to join. If already paired, open the network.	
	2 times		Slow	Designate as network manager and open network	
	3 times		3 times	Occupancy Auto-ON level	
	4 times		4 times	Occupancy Sensitivity	
	5 times		5 times	Primary Time-out	
	6 times			6 times	Partial-OFF Level
	7 times			7 times	Secondary Time-out
	8 times		8 times	Daylighting Target	
	9 times		9 times	Secondary Level	
	Press and hold	Amber	1 time	Return or exit main menu	
Press and hold: 10-14 seconds	Reset	Amber	2 times	Release after the second amber blink to reset to factory default settings	
Press and hold: 15-19 seconds	Exit		3 times	Release after the third amber blink to take no action and exit	

### What to do if...

- Load does not turn ON or status LED does not light up.
  - Breaker is OFF or tripped. Confirm breaker is ON.
  - Confirm device is being supplied power. - Confirm load wiring is correct.
  - Ensure switched output wiring is correct
- Lights flicker or do not dim as expected.
  - Ensure 0-10V wiring is correct.
  - Confirm load complies with minimum and maximum requireme
  - Lamp has a bad connection.
  - Wire connectors not firmly secured.
- Device cannot be enrolled.
  - Maximum number of devices have been enrolled to the network.
- Device is out of range. modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equip

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Consult the dealer or an experienced radio/TV technician for help.

IC STATEMENT: This equipment complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

### RF EXPOSURE AND CO-LOCATION:

To comply with FCC and ISED RF exposure limits for general population/uncontrolled exposure this device should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

FCC SUPPLIERS DECLARATION OF CONFORMITY:

This equipment manufactured by Leviton Manufacturing, Inc., 201 N Service Road, Melville, NY, www.leviton.com. This equipment complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Patents covering this product, if any, can be found on www.leviton.com/patents.

### TRADEMARK STATEMENT

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## FOR CANADA ONLY

FCC CAUTION:

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

# LIMITED 5 YEAR WARRANTY

For Leviton's limited 5 year product warranty, go to www.leviton.com. For a printed copy of the warranty, call 1-800-824-3005.